

CONTROL DEVICE ADDRESS	192.168.250.3
VIRTUAL IF	veth1
ACTUAL IF	eth1

FIG.3

REPEATER ADDRESS	192.168.240.1
VIRTUAL IF	veth1
ACTUAL IF	eth1
DOWN TUNNEL ID	250

FIG.4

CONTROL DEVICE	192.168.250.3
ADDRESS	102.100.200.0
PROTOCOL	80
ADDRESS	80
VIRTUAL IF	veth1
UP TUNNEL ID	150

UP TUNNEL ID	RECEPTION VIRTUAL IF
150	veth1

TRANSMISSION VIRTUAL IF	DOWN TUNNEL ID	FORWARDING DEVICE ADDRESS
veth1	250	192.168.240.1

RECEPTION IF	PORT NUMBER OF DESTINATION TCP/UDP		DESTINATION CONTROL DEVICE ADDRESS
eth1	80	150	192.168.250.3

FIG.8

DOWN TUNNEL ID	TRANSMISSION IF
250	eth1

FIG.9

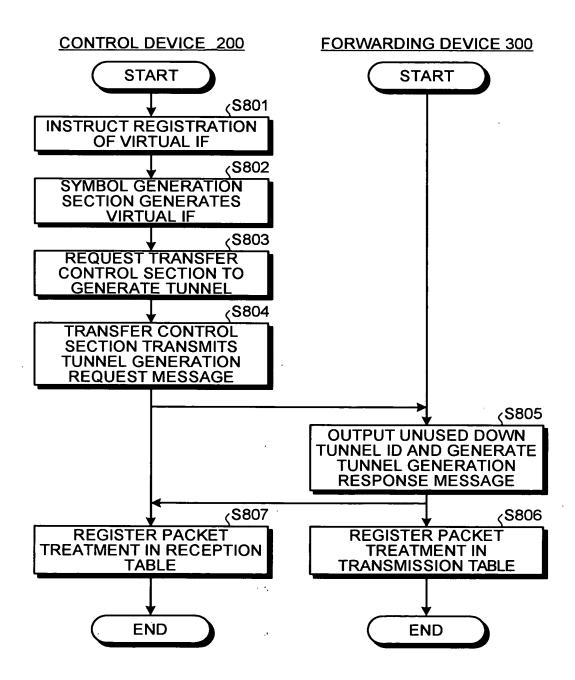


FIG. 10

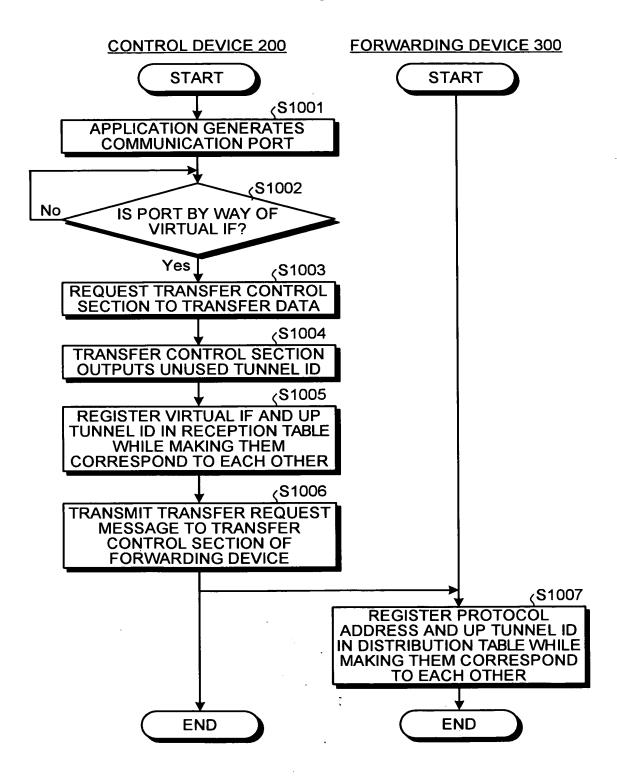


FIG11

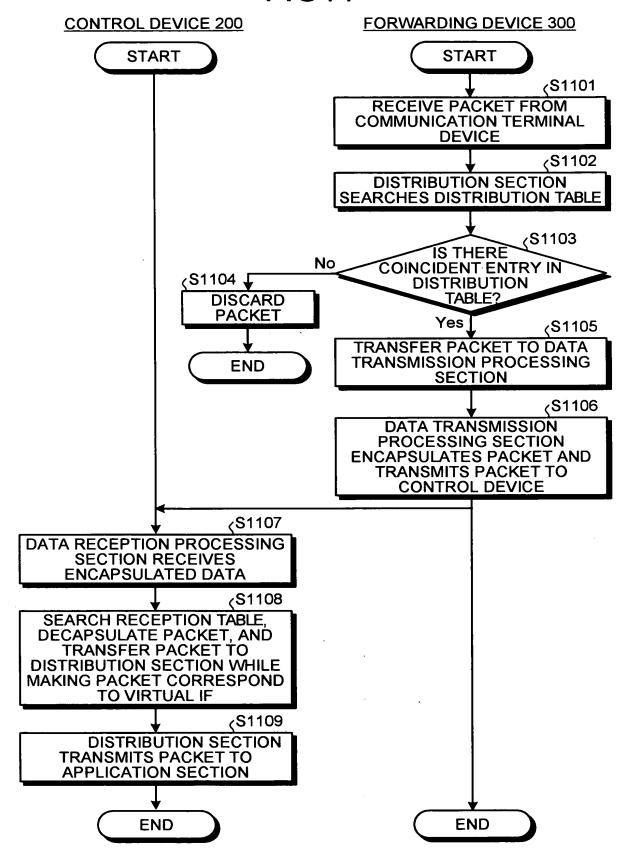
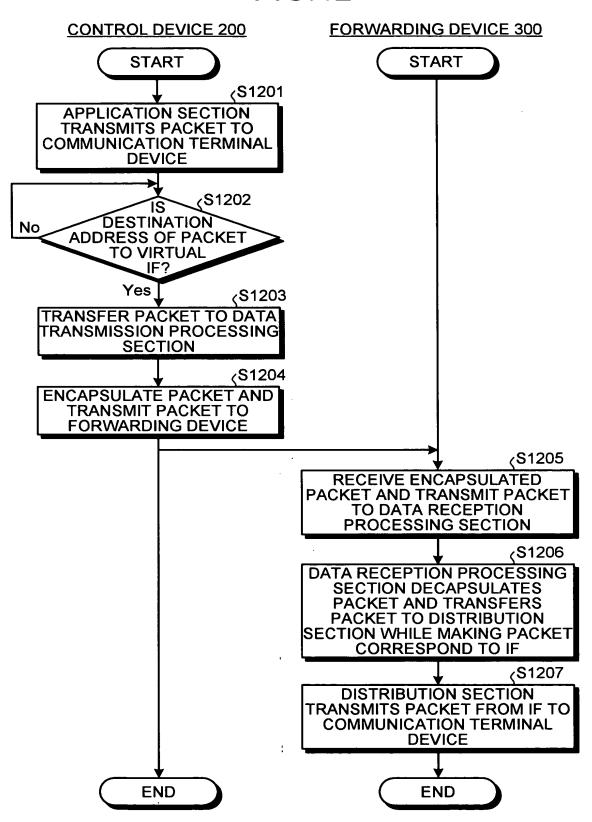
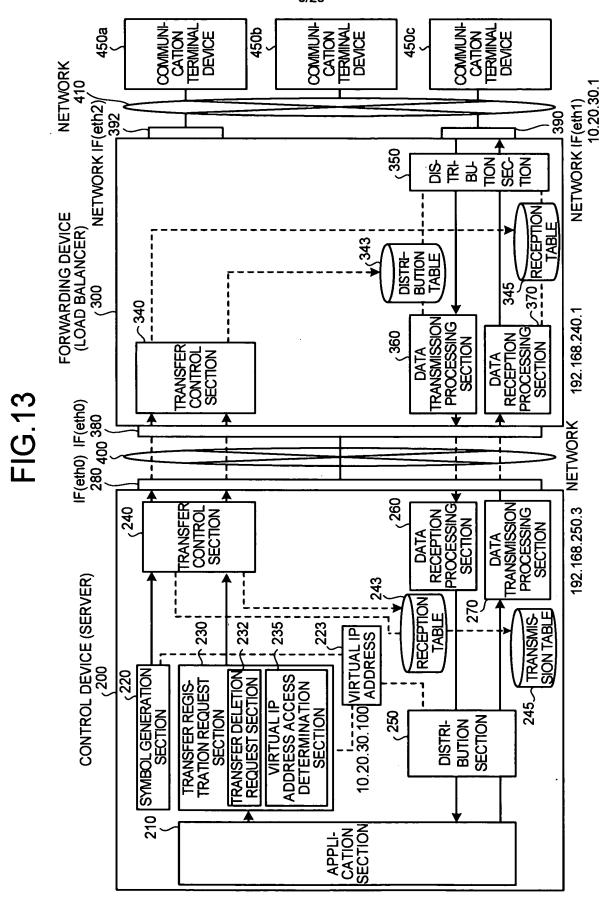


FIG.12





DESTINATION IP ADDRESS	PORT NUMBER OF DESTINATION TCP/ UDP	VIRTUAL IP ADDRESS
192.168.250.3	80	10.20.30.100

FIG.15

VIRTUAL IP	SENDER IP
ADDRESS	ADDRESS
10.20.30.100	192.168.250.3

FIG.16

PORT NUMBER OF DESTINATION TCP/UDP	TRANSFER DESTINATION CONTROL DEVICE ADDRESS
80	192.168.250.3

SENDER IP	VIRTUAL IP
ADDRESS	ADDRESS
192.168.250.3	10.25.30.100

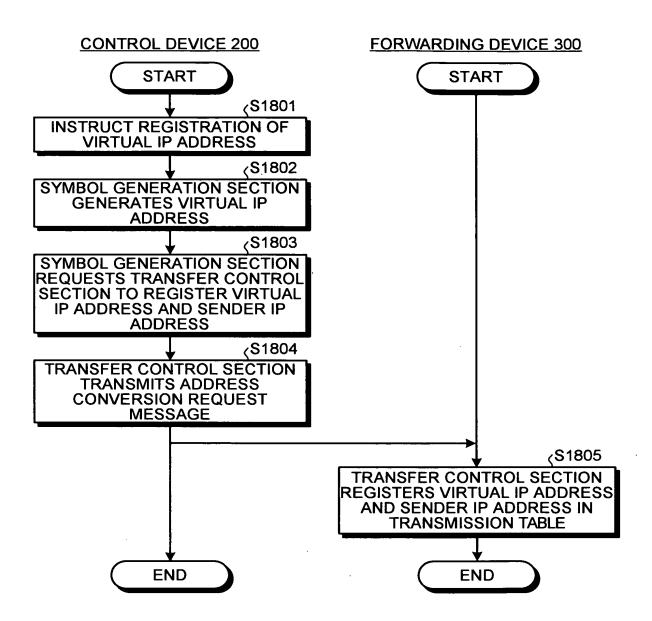
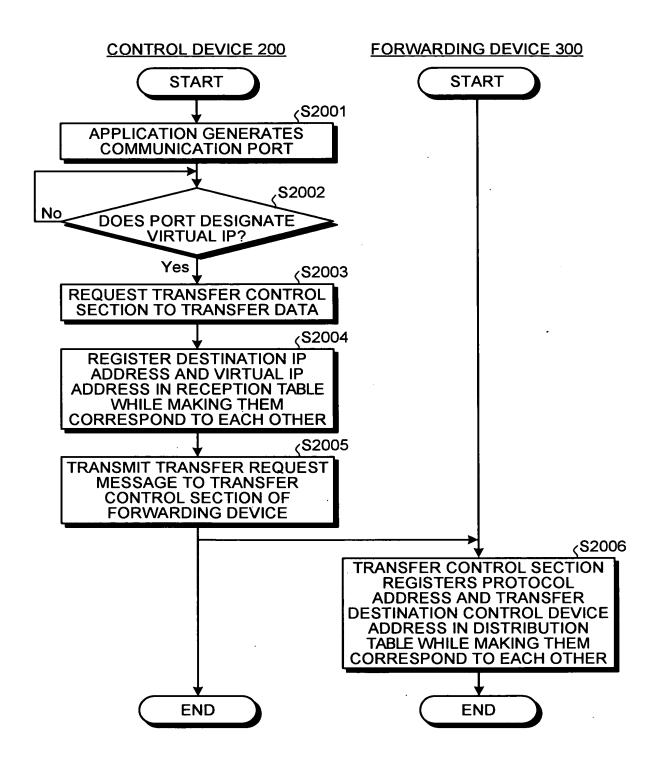


FIG.19

CONTROL DEVICE ADDRESS	192.168.250.3
VIRTUAL IP ADDRESS	10.25.30.100
SENDER IP ADDRESS	192.168.250.3

FIG.20



CONTROL DEVICE ADDRESS

PORT NUMBER OF

DESTINATION TCP/UDP

VIRTUAL IP ADDRESS

RECEPTION IP

ADDRESS

192.168.250.3

80

10.25.30.100

192.168.250.3

FIG.22

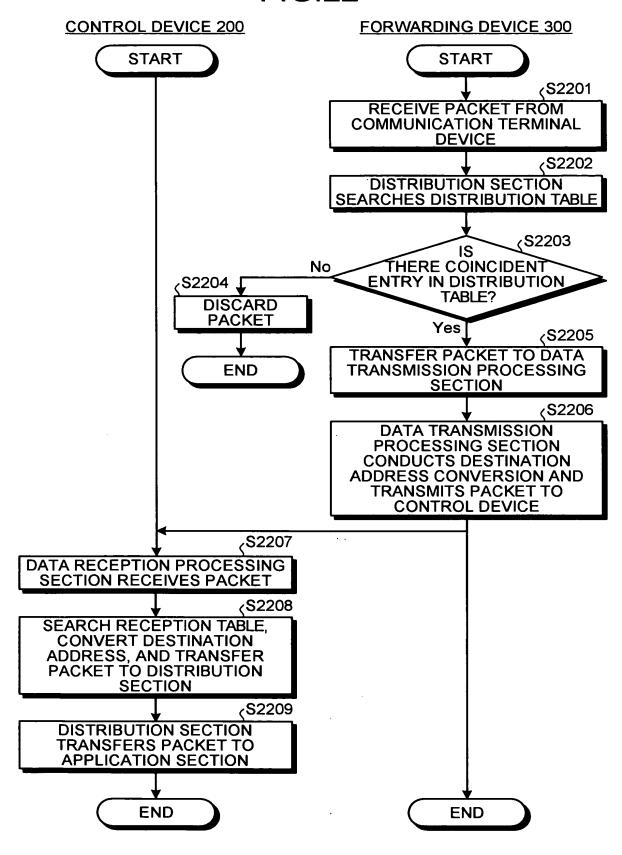
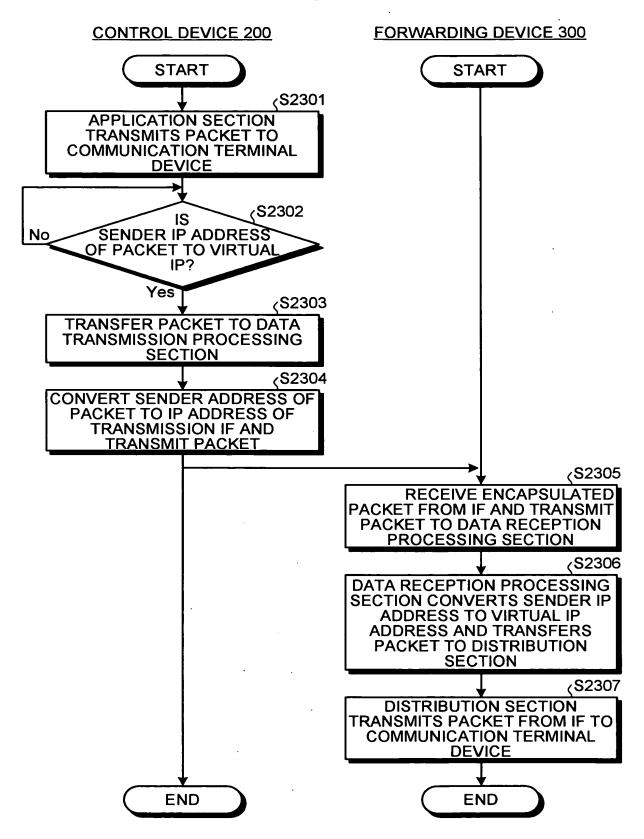


FIG.23



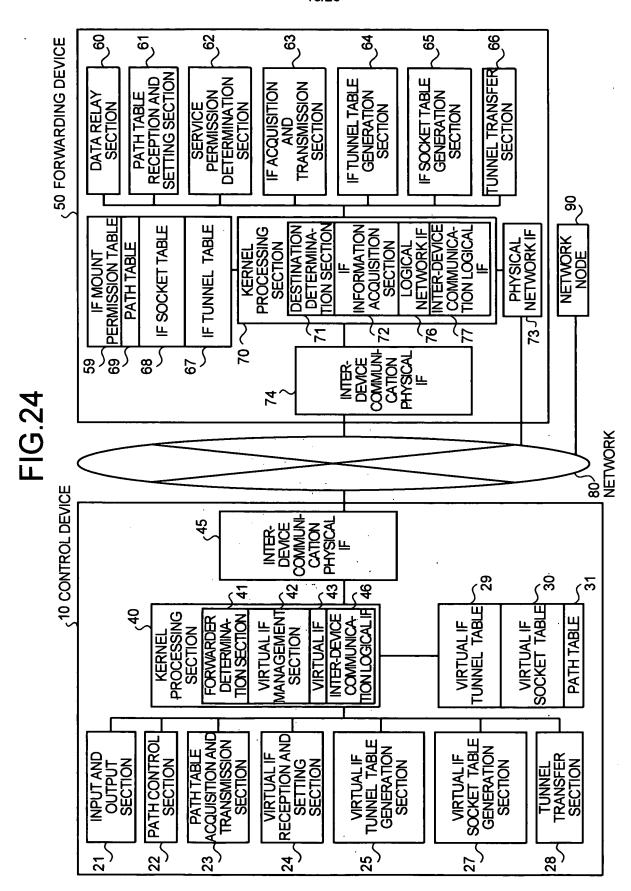


FIG.25 FORWARDING DEVICE 50 CONTROL DEVICE 10 START START _S205 S201 START FORWARDING DEVICE START CONTROL DEVICE S206 ACTIVATE VIRTUAL IF RECEPTION AND SETTING S202 PHASE **ACTIVATE IF ACQUISITION AND** SECTION, AND SET INTERNAL COMMUNICATION PATH (VIRTUAL IF RECEPTION AND SETTING TRANSMISSION SECTION, AND SET INTERNAL COMMUNICATION SECTION⇔VIRTUAL IF MANAGEMENT SECTION) PATH (IF ACQUISITION AND SETTING TRANSMISSION SECTION⇔IF **]**S203 ACTIVATE TUNNEL TRANSFER SECTION INFORMATION ACQUISITION SECTION, AND IF ACQUISITION S204 AND TRANSMISSION SECTION⇔IF) ACTIVATE VIRTUAL IF SOCKET TABLE NITIAL GENERATION SECTION, AND SET INTERNAL ~S207 COMMUNICATION PATH (VIRTUAL IF SOCKET **ACTIVATE TUNNEL TRANSFER** TABLE GENERATION SECTION⇔DESTINATION SECTION, AND SET INTERNAL **DETERMINATION SECTION)** COMMUNICATION PATH (TUNNEL TRANSFER SECTION⇔IF, AND TUNNEL VIRTUAL IF RECEPTION AND SETTING SECTION TRANSFER SECTION⇔DESTINATION S209¦ **DETERMINATION SECTION)** RECEIVES VIRTUAL IF SETTING COMMAND, AND CONNECTS TO IF ACQUISITION AND TRANSMISSION S208 SECTION OF FORWARDING DEVICE (VIRTUAL IF ACTIVATE IF SOCKET TABLE RECEPTION AND SETTING SECTION⇔IF) **GENERATION SECTION AND SET** IRTUAL TING PF S211 INTERNAL COMMUNICATION PATH VIRTUAL IF RECEPTION AND SETTING SECTION (IF SOCKET TABLE GENERATION REQUESTS IF ACQUISITION SECTION⇔IF) ᆸ VIRTUAL IF RECEPTION AND SETTING SECTION **cS210** SETS VIRTUAL I/F, AND SETS INTERNAL COMMUNICATION PATH (DESTINATION CONNECT IF ACQUISITION AND TRANSMISSION SECTION TO DETERMINATION SECTION ⇔VIRTUAL IF) VIRTUAL IF ACQUISITION AND S216 TRANSMISSION SECTION VIRTUAL IF TUNNEL TABLE GENERATION SECTION S212 GENERATES VIRTUAL IF TUNNEL TABLE IF ACQUISITION AND TRANSMISSION SECTION VIRTUAL IF RECEPTION AND SETTING SECTION INQUIRES/ACQUIRES RESPONSE 114 NOTIFIES TUNNEL TRANSFER SECTION FROM PROVISION DESTINATION **DETERMINATION SECTION** S218 TUNNEL TRANSFER SECTION REQUESTS **S213** CONNECTION TO TUNNEL TRANSFER SECTION OF IF ACQUISITION AND FORWARDING DEVICE, AND SETS INTERNAL TRANSMISSION SECTION ACQUIRES PHAS COMMUNICATION PATH (TUNNEL TRANSFER SECTION AND TRANSMITS IF INFORMATION ⇔IF, AND TUNNEL TRANSFER SECTION⇔VIRTUAL IF) S215 GENERATION VIRTUAL IF SOCKET TABLE GENERATION S220 IF TUNNEL TABLE GENERATION SECTION REQUESTS CONNECTION TO IF SOCKET SECTION TRANSMITS TUNNEL TABLE GENERATION SECTION OF FORWARDING IDENTIFIER/ GENERATES IF TUNNEL DEVICE (VIRTUAL IF SOCKET TABLE GENERATION **TABLE** SECTION⇔IF) S219 CONNECT TUNNEL TRANSFER ACTIVATE PATH CONTROL SECTION, AND SET SECTION TO TUNNEL TRANSFER INTERNAL COMMUNICATION PATH (PATH CONTROL TUNNEL SECTION OF CONTROL DEVICE SECTION⇔DESTINATION DETERMINATION SECTION) <u>S</u>221 5223 **DESTINATION DETERMINATION SECTION NOTIFIES** CONNECT IF SOCKET TABLE VIRTUAL IF SOCKET TABLE GENERATION SECTION GENERATION SECTION TO VIRTUAL IF SOCKET TABLE GENERATION SECTION OF CONTROL DEVICE S224 VIRTUAL IF SOCKET TABLE GENERATION SECTION TRANSMITS SOCKET ADDRESS OF PATH CONTROL **S226** SECTION/TUNNEL IDENTIFIER IF SOCKET TABLE GENERATION S225 SECTION GENERATES SOCKET VIRTUAL IF SOCKET TABLE GENERATION SECTION GENERATES SOCKET ADDRESS TABLE ADDRESS TUNNEL TABLE END END

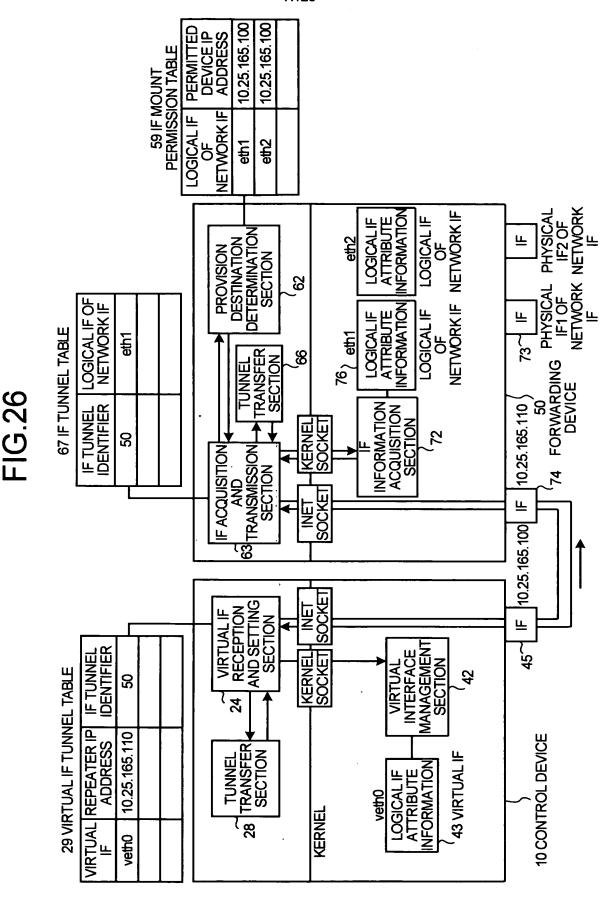
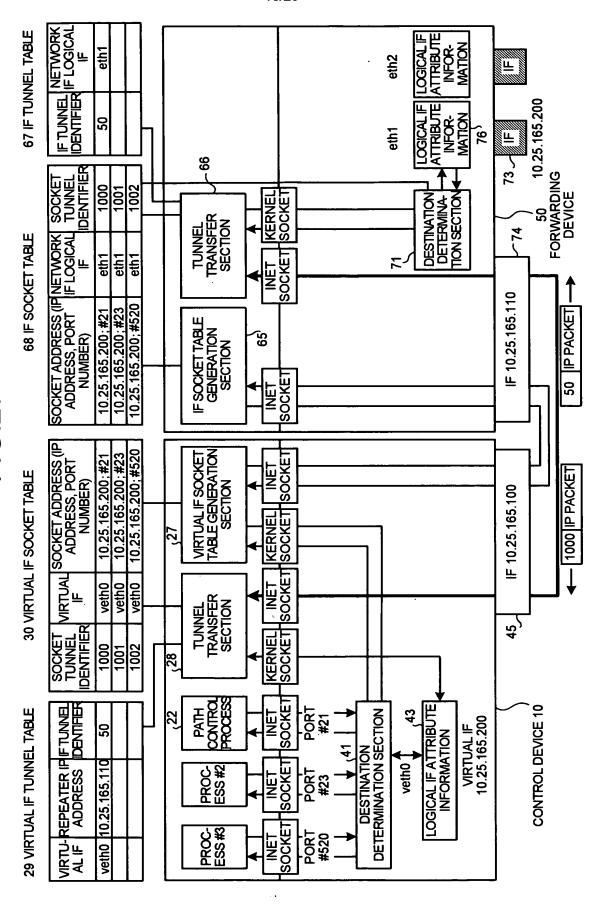
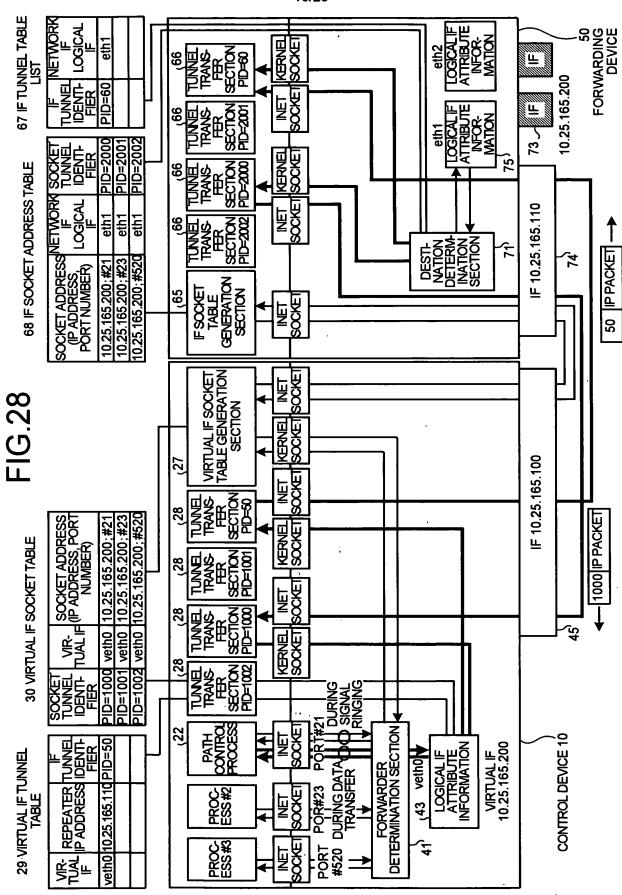


FIG.27





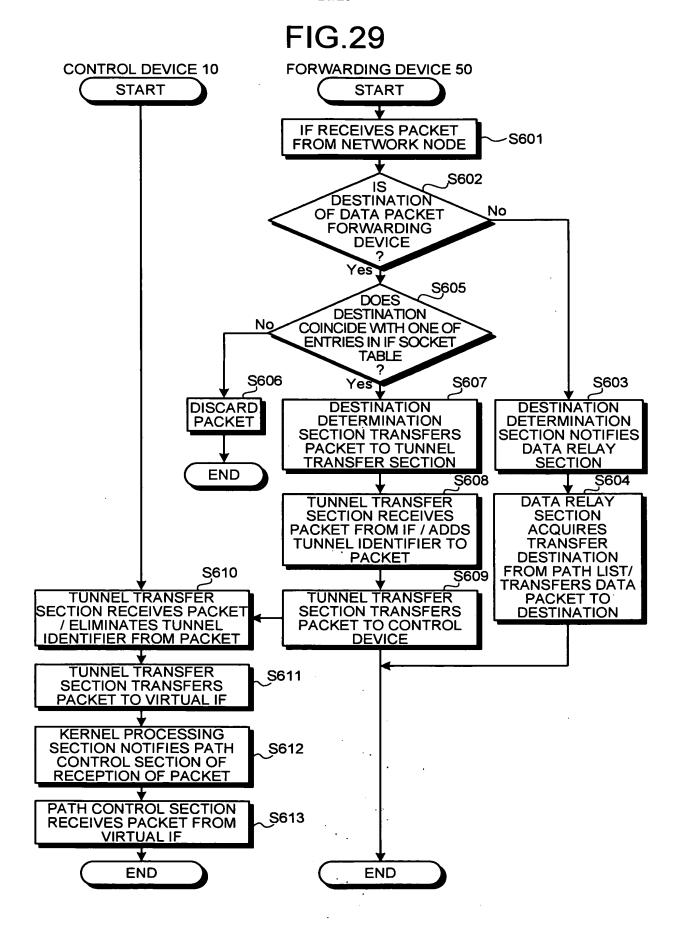
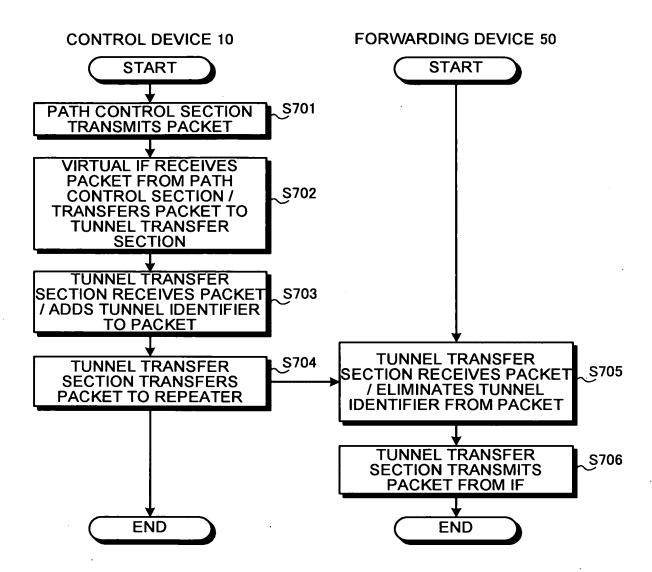


FIG.30



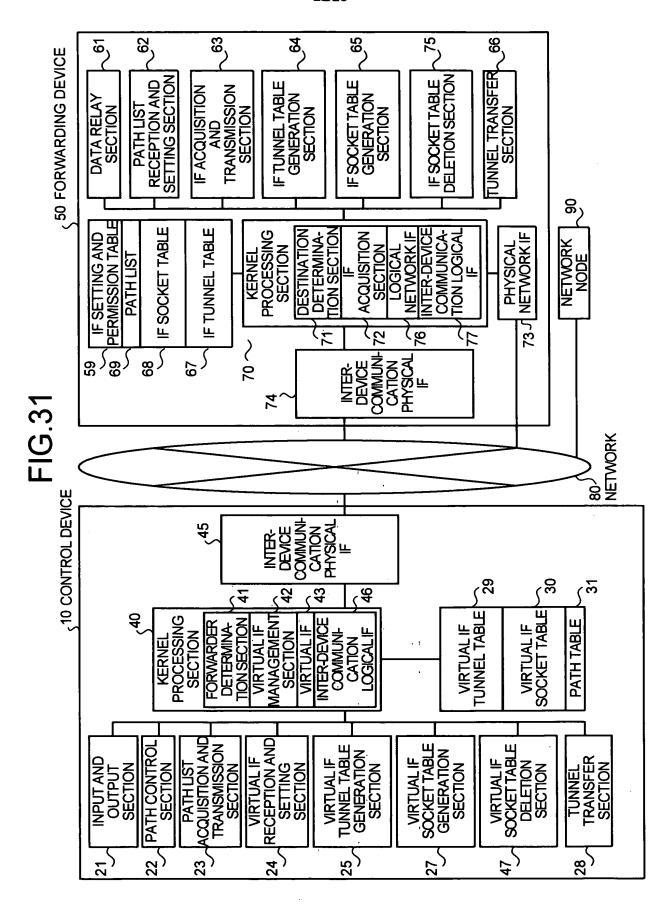
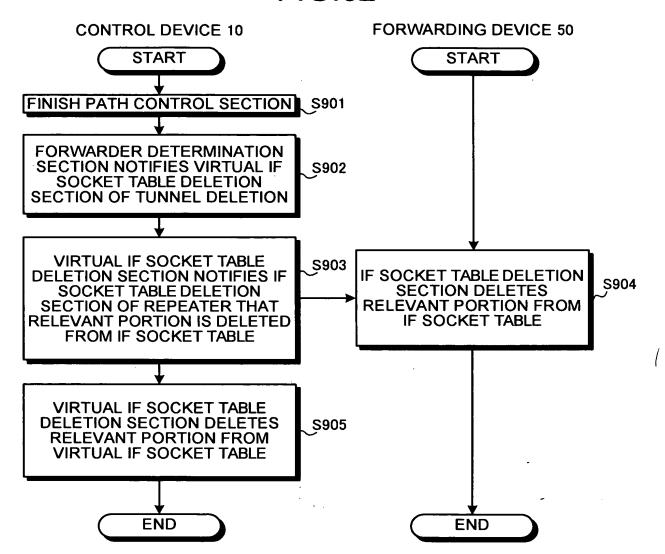


FIG.32



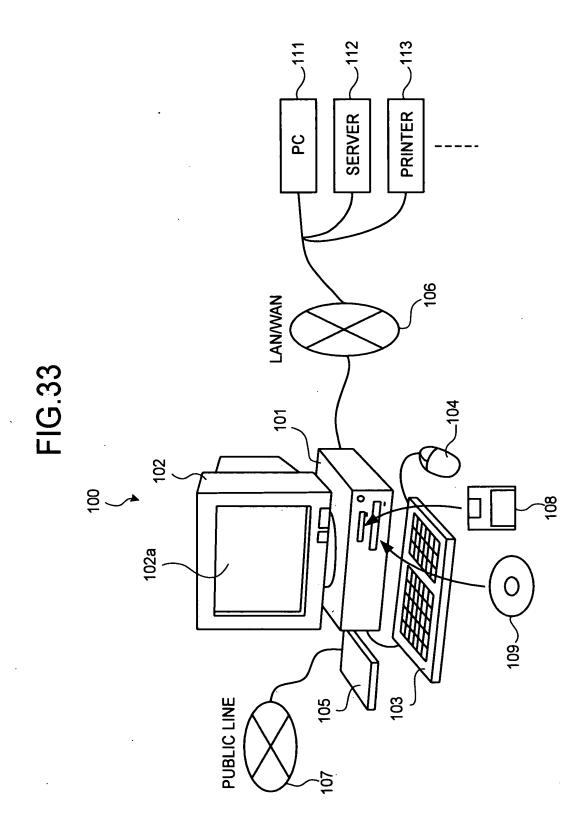


FIG.34

